### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-020030

Address: 333 Burma Road **Date Inspected:** 20-Apr-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 645 **Project Name:** SAS Superstructure **OSM Departure Time:** 1845 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Geng Wei, Zhu Zhong Hai, Xu Ta**CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A **Approved Drawings:** 

N/A Yes No N/A Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** Orthotropic Box Girder (OBG)

### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Amit K. Juvekar, was present during the times noted above for observations relative to the work being performed.

This QA Inspector observed the following work in progress:

#### Assembly, Bay 14, 10BW

During random in-process observations of the fabrication of Orthotropic Box Girder (OBG) segment 10BW, this Quality Assurance inspector (QA) discovered the following issue:

- -Third time weld repair has been performed without approval of the Engineer.
- -The repair weld was performed using Flux Core Arc Welding (FCAW) process on weld joint identified as SEG061A-010.
- -According to ZPMC Temporary weld repair report dated 14th April 2010 this area has previously been repaired two times.
- -ZPMC Quality Control (QC) Ultrasonic Testing (UT) technician has rejected the repair welding in this area for a third time on 19th April 2010.
- -ZPMC excavated the marked location on the same date.
- -The Y location of the repair excavation is 2380mm to 2470mm from the end of the side panel nearest to PP091.5 as shown in photograph.
- -ZPMC completed the repair on 20th April 2010.
- -Segment 10BW is located in Bay 14.

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The attached photographs provide additional detail.

Assembly, Bay 14, 11DE, X35 Stiffener.

SMAW welding of weld joint SEG072D-074, 083, 019; located on assembly, Bay 14, 11DE. Welder is identified as 215553; ZPMC Quality Control Inspector (QC) is identified as Geng Wei. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-B-P-2213-TC-U4B-FCM.

Assembly, Bay 14, 12AW, FL3 to Side Panel.

SMAW welding of weld joint SEG3004AL-22, 28; located on assembly, Bay 14, 12AW. Welder is identified as 066361; ZPMC Quality Control Inspector (QC) is identified as Xu Tao. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-B-P-2214-TC-U4B-FCM-1.

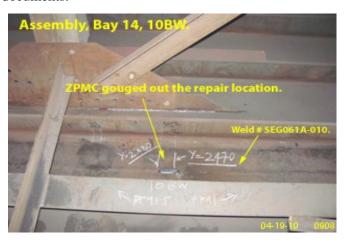
Assembly, Bay 14, 12CW, Corner Assembly, Deck plate stiffener to Diaphragm.

FCAW welding of weld joint CA3010D-201, 202; located on assembly, Bay 14, 12CW. Welder is identified as 067588; ZPMC Quality Control Inspector (QC) is identified as Zhu Zhong Hai. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-B-T-4113-2.

Assembly, Bay 14, 12CW, Corner Assembly, Side plate to Edge plate.

FCAW welding of weld joint CA3010-004; located on assembly, Bay 14, 12AW. Welder is identified as 204730, 058245; ZPMC Quality Control Inspector (QC) is identified as Xu Tao. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-B-T-2232-TC-U4B-F.

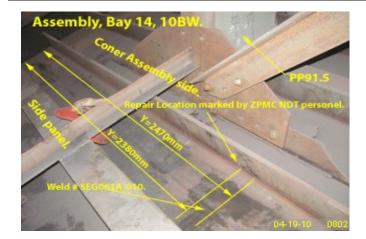
Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





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## **Summary of Conversations:**

No relevant conversations.

## **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 1500.042.2372, who represents the Office of Structural Materials for your project.

<b>Inspected By:</b>	Juvekar,Amit	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer